Ysleta ISD Long-Range Technology Plan
Supporting the Initiatives

The issue of support is as high apriority as any issue in the area of technology, and perhaps as difficult as any to effectively **address.**

YISD understands that to implement technology effectively there must be a support structure whose main **goal** is to ensure that the technology is in usable state, and that it is effectively used.

YISD has approached this issue with several **goals** in mind:

- to define what the district means **by support**
- to define what **the** effective levels of support arc
- to **assess** what the impediments are to creating an effective support structure
- to evaluate levels, types, and approaches to support have been effective in the past
- finally. to define the support structure best suited for the district at this time and define the outcomes that the district wants to attain.

Defining Support

The definition of support. as it applies to the technology initiatives of the **YISD.** refers to three overall types of support:

1. Support to assure network uptime (availability) of resources
2. Support to assure all end-user devices arc operational (computer repair/maintenance)
3. Support to assure that technology is used to its fullest potential in instructional settings

Support to Assure Network Uo-Time

This type of support is similar to the support that **we** come to expect from utility companies. an expectation that the services will always be available.

Specifically. in a scenario where network resources are increasingly important in the instructional setting, then the resources must be available. If teachers are going to depend on the network for

Defining Support (continued)

Support to Assure Network Up-Time (continued)

delivery of a greater portion of the **educational content**, then they **must** be assured that the network will be available.

To help ensure that **the** network resources are available, the support **must** include:

- ✓ Remote monitoring of campus **LAN** network equipment is as **extensive** as possible
- ✓ Network equipment (both **WAN** and LANs) **are** protected either by maintenance/support contracts or by provisions for in-house maintenance/replacement .
- ✓ Creating a support team that provides coverage for all schools **so** response time, and recovery time for operations. is **minimal**

Support to Ensure End. User Devices are Operational

Within the computer repair/maintenance area some of the most important features of the support plan include:

- ✓ **Ensuring** that the computers (and peripheral equipment. i.e.. printers. scanners. etc.) complete their life span productively (for example. for computers. this would mean that they provide at a minimum five years of useful service)
- ✓ Machines are kept in inventory. at a district level facility, that can be used **as** loaners while repairs are completed
- ✓ The level of service for the entire district is satisfactory (i.e.. enough technicians **are** on staff for servicing the equipment, or campuses have sufficient options (district **staff** and third-party service providers) to ensure that equipment is returned to service **as** quickly **as** possible

Defining Support (continued)

Support to Assure Fullest Use of Technology

This area of support deals with the integration of technology into the curriculum, and the most intelligent use of technology to support the instructional **goals** of the **YISD.**

This **area** of support focuses essentially on the use of the technology **resources** in the campus instructional settings (classrooms, library, labs, etc.) but it is necessarily dependent on the

Support to Assure Fullest Use of Technology (cont d)

availability of resources guaranteed by the types of support described above.

The issues that are important in supporting the full use of technology in instruction include:

✓ Continued district-wide discussion (including the Division of Academics. the Department of Technology, and the campuses) of technology integration issues, i.e., the intelligent and effective integration of technology of technology into the curriculum

✓ As a first requirement of the discussion of integration issues. a definition of "integration of technology into the curriculum" should be created focusing at least on the use of technology as a complement to the teaching strengths of teachers

✓ As in the other areas. a structure for the support of technology in instruction should be described

Supporting the YISD Educational Network (continued)

The support of the network is best accomplished **through** a combination of centralized and **decentralized** support personnel.

The support, though, **can only** be successful when the support is structured around a single unifying goal: to make the network and the technology resources available 100% of the time.

Appropriate Support Structure

The District has in the past depended on the district-level network services specialist and system technical specialists to ensure the viability of the district networks.

The Department of Technology Network Services team has the sole responsibility for the support of the **WAN**, has primary respon-sibility for the management and administration of the network electronics installed for the backbone of the campus LANs, and supports the work of the campus technology specialists/ coordinators in the administration of the resources within the campus LAN.

The goal for the support of the network is to define a support structure that includes at a **minimum** the support personnel described below, for each of the seven feeder patterns within the district:

♦ Network Specialist. **This person** will be expert in the administration and support of the campus LAN. including serving as advisor to the campus in the area of adding resources such as servers and instructional applications. deploying network resources within the campus, and troubleshooting and diagnosing problems with the network. This resources will report to the Network Services Manager for the Department of Technology. and will coordinate all work through the Network Services Manager and/or Network Systems Engineer. The **goal** is to staff one Network Specialist per feeder pattern.

Supporting the YISD Educational Network (continued)

Appropriate Support Structure (continued)

♦ System **Technical Specialists.** These individuals **also are** employees of the Network Services department, and they report to the Network Specialists. The System Techs work under the direction of the Network Specialists to troubleshoot LAN problems (hardware, operating systems. and adminis-trative software), to connect workstations and peripheral equipment to the LAN, to assist Network Specialists in the deployment of network resources. The goal is to **staff one** *to* two System Technical Specialists per feeder pattern.

♦ Computer Repair Technicians. Because of the fluctuation in demand for computer repair, this function will remain centralized for the immediate future (2001-02 school **year)** with yearly review of the need to assign the repair technicians to specific feeder patterns. These staff members. again for the **time being.** Will continue to report to the Depamnent of Technology Application Suppon Specialist (Help Desk Manager). The District has for the last several *years* encouraged campuses and departments to purchase extended warranties for all equipment. to reduce the manpower requirements within the district for repair of computers and peripherals. Because of the success of that practice. the district has been able to suppon the district demand for computer repair with a minimum of positions.

♦ Campus Technology Coordinators. These campus-based positions have in the past been responsible for a multitude of technology-related tasks. Depending on the campus. these staff members **have been** technically-oriented non-teaching positions. teachers with additional duties to support the network and/or support equipment maintenance. and/or suppon training for the use of technology in the curriculum. Though these positions will continue **to** be campus-based and **report** to the campus principal. **the goal of the district** is **to**

Supporting the YISD Educational Network (continued)

Appropriate Support Structure (continued)

♦ support the network and maintain computers with **centralized staff, and to have the campus-based staff** support the instructional initiatives.

Supporting the Instructional Initiatives

While support of the network is crucial to the success of technology projects in the district, **that** support must be complemented with strong programs to support the vv of technology to help achieve the district's instructional objectives.

In general, the same considerations **that** apply to the area of technical support also apply to support of the use of technology, and it is important to understand that commitment to only one type of support will not result in the best outcomes for the YISD technology initiatives. The commitment must be made both to technical support of the network and hardware/software resources,

and equally to suppon of the use of technology in instructional settings.

Appropriate Support Structure for Technology Integration

In the past. as with technical support, the district has committed both district-level and campus-based efforts to the support of technology in instructional settings.

At the district level, professional development programs have addressed technology skill acquisition, curriculum development using technology, and the vv of specific productivity and instructional software programs. Campuses have employed their resources for the support, via **training** within the campus or via third-party staff development programs (including college level coursework). for initiatives that are most effective for the teachers and programs in effect at specific campuses.

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Ysleta ISD Long-Range Technology Plan
Supporting the Initiatives

The **goals** for the support of **wise** and effective instructional use of technology include:

- Effective Centralized Support. The central players in the district's centralized support to campuses in the use of technology will be the Professional Development depamnent of the Division of Academics and from the Office of Technology the Instructional Technology department, the Network Services group, Telecommunications, and in some areas of training the **Student** System group.

- Campus Support. **A consensus** is required on the type of support offered by the campus, even if the consensus is that campuses should be given complete flexibility in terms of staffing, training subject, etc. For example, should a position (or variety of positions) be created for campus suppon (a job description should be defined for all positions the campuses can select from)? What are the **suppon** areas that should be included in the campus support: any level of technical support, training in technology integration area **only.** combination of technical/integration support, etc.?

- Articulation of Centralized/Campus Support Efforts. The Dismct must define the articulation of the support initiatives. and provide for the continued articulation and coordination of efforts by including coordination of training efforts as one of the evaluation criteria for support.

Appropriate Technology Intearation Support Activities

As pan of the goal of supporting the use of technology at every level of the curriculum. the Dismct will outline:

- Expectations for teacher technology skills.

- Expectations for representative technology activities at grade levels and subject matter.

The appropriate suppon activities will derive from the expectations above. to ensure that campuses are comfortable in meeting the technology expectations.

Supporting the Instructional Initiatives '(continued)

Appropriate Technology Integration Support Activities (continued)

The activities will be tailored by both the district-level support providers (Professional Development, Instructional Technology. Network Services, etc.) and at each individual campus; however, the skills and training areas addressed at each campus will include:

o Network Skills. One of the most widespread features of modem computing is the networked environment. In order to ensure that our students are comfortable in that environment the curriculum at all levels should include some academic work in a networked scenario.

The training, therefore, should ensure that teachers are adept at the use of e-mail, internet access and searches. evaluation of Intemet web sites, and how those Internet resources are valuable to instruction and how they are made available in the classroom.

o Productivity Software. Word processing. spreadsheet. and database software are increasingly important to teachers both for administrative tasks such as preparing lesson plans. proposals. etc.. but they are also useful in classroom settings. Teachers who are recent graduates should be expected to have mastered these skills as pan of their undergraduate requirements: however. some of the suppon for may address these areas.

o Presentation Software. PowerPoint (or similar software) has become a commonly used tool. both for classroom presentation and as a tool students use for presentation of their own material and reports. Training in the use of the software and in the most effective presentation of material should be made available at campuses.

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Supportinq the Instructional Initiatives (continued)

Appropriate Technology Integration Support Activities
(continued)

o   Instructional **software.** Campus initiatives often call for the implementation of specific instructional software, either for specific grade levels or throughout the campus. This type of **training will necessarily be more** specialized than the training for productivity and/or presentation software; however. both dimict-level and campus-based **trainers** should **ensure** that **faculty are trained** in the instructional software packages adopted at their campus.

An important caveat to the issue of training for instructional software is that subject-specific **instructional** software does not necessarily satisfy the requirements for teaching technology applications. Campuses are being advised in this regard by way of review of technology integration goals written into the campus ICAP.

c   Equipment Operation. Basic workstation operation and printer **use** are required topics. In addition, when initiatives such as the incorporation of portable wireless equipment are brought into a campus. training for the teachers is required in the operation and best use of the equipment in the classroom (including. perhaps. sample lessons or suggestions for classroom activities with the equipment). Increasingly, technology initiatives either require the use of peripherals (**scanners.** cameras. etc.) or are enhanced by the use of technology such as electronic whiteboards. Training in thew **areas** is necessary for full integration of technology into the classroom instruction.

c   Integration Strategies. The **most** important area of support, both for dismct level and campus level support staff, is integration of technology into the curriculum. Campus trainers **are** the best resources for identifying the **types** of integration strategies that will work **most** effectively **at** their

Supporting the Instructional Initiatives (continued)

Appropriate Technology Integration Support Activities (continued)

campus. While the network skills, equipment operations. and software use must be taught, the integration strategies are what takes the technology resources to the students in the most meaningful fashion.

Addressing Impediments to Effective Support

As with other K-12 school districts, YISD has met several challenges in defining and implementing the most effective suppon structure and strategies.

The issues that impact our success in defining an appropriate and effective support structure are the same issues that impact virtually every K-12 district in the country. The September 2000 issue of Tech *Support* identified four of the most common suppon issues in the K-12 environment:

o competition for technical support **staff**

o hesitancy on the pan of campuses/districts to hire non-teaching faculty

o administrators outside of the Department of Technology **are** not fully aware of staffing demands

o the best suppon structure for **K-12** has not yet been defined

The issues below are specific issues that MSD has addressed. or is addressing. They all to some extent acknowledge the impact of the four concems above. and they all are issues that the District continues to address. Some of the issues discussed below

Budaet constraints

There are several formulas for the calculation of the appropriate number of suppon personnel, most centering on support personnel

Addressing Impediments to Effective Support
(continued)

Budget constraints (continued)

as a function of the number of devices on the network or in an organization.

For virtually **every K-12** educational institution the formulas are unsupportable from a budget standpoint. As a result, K12 dismcts have created support organizations that combine a centralized/ decentralized approach to virtually every aspect of technology support except wide area network support (which in most instances is either a contracted expense or a central office item).

There have been several reasons why the budgetary constraints have continued. One of the reasons is that with a fixed budget dimicts are reluctant to hire non-teaching personnel. That is understandable, given the general feeling that the focus of a campus individually, or a dimict collectively. ought to be on the instruction. However. with the increased of technology resources in the day-to-day instruction, districts are also faced with the very real consideration that the technology resources can neither be taken for granted. nor can they be used only when convenient.

Over the next several years, the goal of the dismct is to define the technical support for the network in terms that stress the comple-ment to instruction that these employees perform. In some organizations. particularly higher education. these staff members are defined as professional faculty. so that their conmbutions are formally recognized organizationally and factored into the instructional outcomes.

Unrealistic Staffing Expectations

Too often. and up to the present time. the cost for technology initiatives has been limited to the costs to acquire and install hardware. and the cost of software. Ongoing costs (maintenance. repair, upgrades, and replacements) have never been correctly accounted and in some cases not even considered. Further, support

Addressing Impediments to Effective Support
(continued)

Budget constraints (continued)

of the resources and training are other coN not typically applied as post-implementation costs.

One of the additional factors that YISD must address is staffing levels. YISD has over 55 campuses, each with a LAN and several hundred workstations. In addition, the training requirements arc significant at each campus, both for basic computer use and for advanced curriculum integration issues. Every campus needs suppon in the effon to integrate technology into instruction. and the most effective scenario is one combines centralized suppon based on feeder pattern and/or grade level, with campus-based support in the form of full-time specialist with responsibilities solely in the integration area.

To **address** the misrepresentation of ongoing costs, more dismcts are becoming more careful to define the costs of all the elements required to make an initiative successful. Because the suppon of the network and instructional technology initiatives arc increasingly recognized as core requirements, more districts (including YISD) are factoring these costs into technology projects.

These increased suppon costs and requirements are especially important in the planning and implementation of projects that have enormous related increases in suppon costs, such as student laptops and teacher laptops. YISD has been careful to account for these requirements: the challenge is to attach a realistic and sustainable post-implementation cost to the staffing requirements for suppon of technology initiatives and to build that cost into the budget for the project.

Addressing Impediments to Effective Support (continued)

Definino an Appropriate Support Structure

K-12 districts throughout the country are grappling with how to support technology. Many scenarios for support organizations have been proposed, and several have received favorable reviews. However, no support scenario has received general approval.

Compounding the problem is the fact that support has always been of two essentially disparate types: technical support, and support for technology integration. The technical and integration expertise is rarely available in the same person; because the type of support has usually been the responsibility of at lean two different departments, the additional organization communication and coordination has to be a priority.

Finally, the issue of centralized (district level) and decentralized (campus-based) support has been an interesting issue to sort out. There has been little consensus on which support responsibilities ought to be centralized and which ones ought to be campus-based. As a result. there are several different types of suppon at the campus level. each corresponding with the technology strengths of the campus generally and/or the requirements at the campus.

The intent of the district over the next several years is to define universally the best areas for centralized support and. likewise. the best areas for campus-based support. The formalized aspects in this area specifically job descriptions and job titles, will be addressed as well. Ultimately. this will allow the district and the campuses to deliver. in combination a far more effective and cost-efficient level of suppon for al aspects of technology.

Ysleta ISD Long-Range Technology Plan
Supporting the Initiatives

A Plan for Professional Development

The professional development initiatives in the area of technology can be broken down into two essential areas:

- technical areas
- technology integration areas

Professional Development for Technical Support

The staff development is this area will target the technical specialists throughout the district, in the cenual office departments and campuses.

The providers of the services will be trainers from third-party trainers and vendors, and technical staff from the district.

The topics will include LAN adminimation and management (including adding users, customizing filtering, creating and managing browser profiles. etc.), web page development WAN adminimation and telephone uaining.

Professional Development for Technology Intearation Support

The staff development is this area will target a wider range of district personnel. primarily from the campuses.

The providers of the services will be trainers from third-party trainers and consultants. district trainers (from Division of Academics and Office of Technology). and campus experts.

The topics will include basic computer operations, productivity software training. instructional software mining. Internet training at various levels (including basic searches and bookmarking. review and evaluation of sources. and integration of the internet into classroom projects and research). creating assignments to optimize technology use. incorporating project-based assignments into the curriculum, using digital portfolios. using video in the classroom. and other uses for technology in lessons and classroom activities.

A Plan for Professional Development (continued)

Coordination of District and Campus Professional Development Strategies

For the last several years, each YISD campus has submitted an Integrated Campus Action Plan (ICAP) that addresses instructional goals and objectives and other initiatives at the campus.

The ICAPs include campus professional development initiatives, which can be supported internally at the campus or with support from the Division of Academics Professional Development staff.

The articulation of the campuses ICAPs with the district professional development initiatives is especially important in the technology area. Campuses are working together and with the district level staff to ensure the critical subject areas arc covered, all teachers arc given the opportunity to enhance their skills, and all the necessary training is provided that complements the campus instructional initiatives.